

7&8 Revise and Check

For instructions on how to use these pages, see p.43.

STUDY LINK

- iTutor

Test and Assessment CD-ROMs

- Quick Test 8
- File Test 8

GRAMMAR

- | | |
|----------------------------|-----------------|
| a 1 to have apologized | 6 admitting |
| 2 go | 7 to have seen |
| 3 to use | 8 calling |
| 4 to be going out | 9 to be seen |
| 5 to sit down | 10 to start |
| b 1 not permitted | 6 I can hear |
| 2 You should have listened | 7 tastes like |
| 3 we didn't need to get up | 8 ✓ |
| 4 ✓ | 9 It's about to |
| 5 ✓ | 10 ✓ |

VOCABULARY

- | | |
|---------------------------|------------------|
| a 1 misspelt / misspelled | 5 undercharged |
| 2 demotivated | 6 discontinued |
| 3 outnumbered | 7 rescheduled |
| 4 overrated | 8 illogical |
| b 1 still-life | 4 white elephant |
| 2 self-portrait | 5 black market |
| 3 red herring | 6 red tape |
| c 1 blister | 5 mule |
| 2 stitches | 6 post |
| 3 surgeon | 7 log |
| 4 rash | 8 dream |
| d 1 beaten | 5 cancel |
| 2 set | 6 recharge |
| 3 hit | 7 breathtaking |
| 4 touristy | 8 sample |

CAN YOU UNDERSTAND THIS TEXT?

- a He concludes that it is worth having travel insurance.
b 1 T 2 T 3 T 4 F 5 T 6 T

CAN YOU UNDERSTAND THIS FILM?

4 36))

- b 1 F 2 T 3 F 4 F 5 T 6 F 7 F 8 T 9 T 10 F

4 36)) Available as MP3 on CD4

A Short Film on the history of penicillin

I'm Nigel and this is St. Mary's Hospital in London. Humanity has always fought against disease and infection, but it wasn't until the 19th century that people began to understand the role bacteria and other germs had to play. This led to rapid improvements in hygiene and, for the first time, people could prevent infection. But it wasn't until 1928 that Alexander Fleming found a way to treat infection, when he discovered penicillin here at St. Mary's Hospital.

Alexander Fleming was a Scottish doctor and scientist. He was born in 1881 and began research here in 1906. Fleming was a brilliant researcher, but he was notoriously untidy. After a month's holiday he returned to find a mould growing on a bacteria sample he had discarded. As he was throwing it away he noticed the mould was actually killing the bacteria. When he investigated further he found the type of mould was *Penicillium*. Fleming named the substance it released *penicillin*.

Fleming realized that penicillin could treat infection, but he couldn't produce enough of the antibiotic agent to be truly effective. It looked like the end of the road for penicillin, until two Oxford scientists took up the challenge.

Howard Florey was an Australian pharmacologist and pathologist working at Oxford University. He led a team researching antibacterial agents produced by microorganisms.

Ernst Boris Chain had fled Nazi Germany to work as a scientist in England. He was one of Florey's most talented colleagues and was studying naturally-occurring chemicals that could kill bacteria.

Together they started looking into Fleming's discovery and decided they had better reinvestigate some of his findings. Based here, at Lincoln College, an entire team of Oxford-based scientists were soon working on penicillin and by late 1940 they had invented a way to mass-produce the drug. They had also trialled the drug here, at Oxford's Radcliffe Infirmary.

By this time another war – World War II – had started. Suddenly there was a great need for a drug which could fight infection and the American War Production board were willing to spend big money. By 1945 they were able to produce enough penicillin to treat the entire Allied forces. That same year Fleming, Florey, and Chain won the Nobel Prize in Medicine and penicillin was being hailed as a wonder drug.

Penicillin was the first antibiotic, a range of drugs used to treat and prevent infections. There are now more than a hundred antibiotics which can treat all kinds of illnesses, from mild conditions like acne to serious infections like meningitis. For over 70 years they have saved countless lives, but scientists warn we are now facing a new threat – antibiotic resistance.

Bacteria are living organisms, and like any living thing they adapt to survive. Many strains of bacteria have evolved to fight off antibiotics and this means some infections are now resistant to treatment.

Although some of this resistance is naturally occurring, much of it is our own fault. Antibiotics have become far too widely used, meaning that many strains of bacteria have been overexposed to these drugs and, as a consequence, have developed resistance.

There are several reasons for this, but one of the most damaging is over-prescription. Some doctors have used antibiotics as a 'cure-all' treatment, prescribing them for minor illnesses. As a result, many patients now demand them, regardless of what they are suffering from or how effective the drugs will be. In some countries antibiotics are even available over-the-counter, so there are almost no restrictions on how they are supplied.

This overuse of antibiotics has fuelled the rapid growth of resistance, and if it continues, it will have disastrous consequences. Suddenly illnesses we regard as minor could be deadly, and most major surgery – such as heart operations or cancer treatment – will be impossible to carry out because the risk of untreatable infection will be too high.

But if we can control our use of antibiotics we can limit the spread of resistance. Global legislation is required to restrict the over-supply of antibiotics and we all – doctors and patients – need to make sure we use the drugs sparingly and responsibly.

But while we can certainly slow down the development of antibiotic resistance, we will never stop it entirely. That is why scientists are urgently trying to discover new forms of antibiotic that bacteria may not yet be resistant to. The issue is now so serious that if this can be achieved, it will be the most important antibacterial breakthrough since Fleming's discovery of penicillin.